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IS 9061 (1989): Eye Surgery Instruments - Dilators, Punctum, Wilder's Pattern (Modified) [MHD 5: Ophthalmic Instruments and Appliances]

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“Knowledge is such a treasure which cannot be stolen”





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*Indian Standard*

EYE SURGERY INSTRUMENTS—DILATORS,  
PUNCTUM, WILDER'S PATTERN  
(MODIFIED)—SPECIFICATION

( *First Revision* )

भारतीय मानक

नेत्र शल्यक्रिया उपकरण — विस्फारणी, रन्धक विल्डर नमूने की  
( रूपान्तरित ) — विशिष्ट  
( पहला पुनरीक्षण )

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BUREAU OF INDIAN STANDARDS  
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**FOREWORD**

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards on 21 April 1989, after the draft finalized by the Eye Surgery Instruments Sectional Committee had been approved by the Consumer Products and Medical Instruments Division Council.

This standard was first published in 1979. The present revision has been taken up to include certain modifications in order to bring the specification in line with the modern manufacturing practices. The tolerance clause, covering reference of concerned Indian Standard, has been modified and clauses on general finish, surface finish, passivation and final treatment have been added.

## Indian Standard

# EYE SURGERY INSTRUMENTS – DILATORS, PUNCTUM, WILDER'S PATTERN (MODIFIED) – SPECIFICATION

*(First Revision)*

## 1 SCOPE

**1.1** This standard covers the dimensional and other requirements for three sizes of Wilder's pattern (modified) punctum dilators used in eye surgery.

## 2 REFERENCES

**2.1** The following Indian Standards are necessary adjunct to this standard:

IS No.	Title
IS 2102 (Part 1) : 1980	General tolerances for linear and angular dimensions ( <i>second revision</i> )
IS 6603 : 1972	Stainless steel bars and flats
IS 7531 : 1975	Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments

## 3 SHAPE AND DIMENSIONS

**3.1** The shape and dimensions shall be as shown in Fig. 1.

**3.1.1** The tolerance on dimensions of working ends shall conform to 'fine' class of deviation and the tolerance for remaining dimensions shall conform to 'medium' class of deviation of IS 2102 (Part 1) : 1980.

## 4 MATERIAL

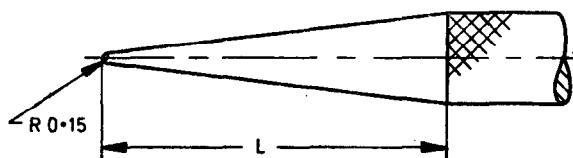
**4.1** The dilators shall be made of stainless steel conforming to Designation 04Cr18Ni10 or 07Cr18Ni9 of IS 6603 : 1972.

## 5 REQUIREMENTS

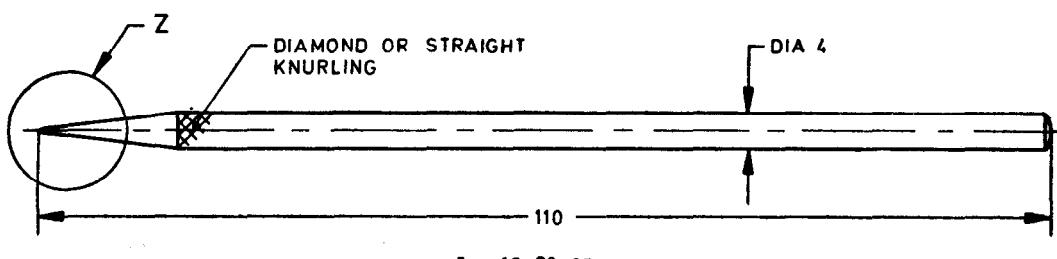
**5.1** The dilators shall be free from defects like burrs, pits, cracks and other surface defects.

**5.2** The dilators shall have fine rounded and non-piercing point.

**5.3** All surfaces shall be free from pores, crevices and grinding marks. The instruments shall be supplied free from residual scale, acid, grease and grinding and polishing materials. Compliance with these requirements shall be checked by inspection using normal vision.



ENLARGED VIEW AT Z



$L = 15, 20, 25$

All dimensions in millimetres.

FIG. 1 DILATOR, PUNCTUM, WILDER'S PATTERN (MODIFIED)

## 6 PASSIVATION AND FINAL TREATMENT

**6.1** The instruments shall be treated by a suitable passivation process.

### NOTES

1 Methods of passivation are by electropolishing or by treating with 10 percent (v/v) nitric acid solution for not less than 38 minutes at a temperature of not less than 10°C and not exceeding 60°C. The instruments shall then be rinsed in water and dried in hot air.

2 If the joints are lubricated, the lubricant shall be non-corrosive and suitable for medical application according to the relevant national pharmacopoeia.

## 7 SURFACE FINISH

**7.1** The surface finish shall be one of, or a combination of the following:

- a) mirror polished;
- b) reflection-reducing, for example satin finish, matt black finish;
- c) an applied surface coating, for example for insulation purposes.

### NOTES

1 The satin finish shall be effected by an appropriate procedure such as grinding, brushing, electropolishing

and, in addition, satin finishing (glass beading or satin brushing). The finish shall be uniform and smooth and it shall reduce glare.

2 Instruments to be provided mirror finish shall be adequately ground to remove all surface imperfections and polished to remove grinding marks, resulting in a mirror finish. The mirror finish shall be effected by an appropriate procedure, such as polishing, brushing, electropolishing, and mirror buffing.

## 8 TEST

### 8.1 Corrosion Resistance Test

Test the dilators in accordance with IS 7531 : 1975. The dilator shall show no sign of corrosion after the test.

## 9 MARKING

**9.1** Each dilator shall be legibly marked with the manufacturer's name, initial or recognized trade-mark, in such a way that it does not in any way impair its functioning.

## 10 PACKING

**10.1** The dilator shall preferably be packed individually in suitable cartons, so as to avoid any damage in handling.

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